Course Syllabus

San Jose State University
Department of Computer Science
CS 158A: Computer Networking, Spring 2022

Course and Contact information

- **Instructor:** Dr. Paul Sanghera
- **Office Location:** Online Office
- Canvas: https://sjsu.instructure.com/courses/1473441/pages/office-dr-paul-sanghera
- Zoom: Join URL: https://sjsu.zoom.us/j/88664679542 (Links to an external site.)

- Office Hours: Tuesday 7:15 PM – 8:15 PM
- **Telephone:** 408-858-1655
- **Email:** paul.sanghera@sjsu.edu (preferred)
- **Class Days/Times:** Tuesday and Thursday, 6:00-7:15 pm

   Class Location: Zoom: Join URL: https://sjsu.zoom.us/j/84772791973 (Links to an external site.)

- **Prerequisites: 1)** CS 146: Data Structures and Algorithms and 2) CS 147: Computer Architecture or   CMPE 120: Computer Organization and Architecture with grade C- or better; or instructor consent.

Course Description

Introduction to computer networks, including network layered architectures, local and wide area networks, mobile wireless networks, Internet TCP/IP protocol suite, network resource management, network programming, network performance, network security, network applications.

Zoom Class Meeting

Tuesday: 6:00 --- 7:15 pm

Thursday: 6:00 --- 7:15 pm

Course Format

Technology Intensive: Hybrid Online Courses

This course will be taught online. You need Internet connectivity and zoom installed on your a computer to participate in the classroom activities and submit assignments.

Installing Zoom

https://www.youtube.com/watch?v=fVu9BILRkww

Course Learning Outcomes

Have an ability to

CLO1	know the concepts and principles underlying the structures and designs of computer network.
CLO2	understand network layered architectures and their associated benefits.
CLO3	understand the Internet TCP/IP protocol suite.
CLO4	know basic network programming, performance and diagnostic tools
CLO5	configure a basic computer network

Note. You are responsible for regularly checking with the messaging system through Canvas including The Course Announcement and Module to learn of any updates, and actions to preform.

Required Texts

Required Textbook

Computer Networks, *Sixth Edition by Andrew S. Tanenbaum, Nick Feamster, David J. Wetherall, Publisher: Pearson.*

Recommended Texts

Internetworking with TCP/IP, Volume One, 6th Edition by Douglas Comer, *Publisher: Pearson.*

Course Requirements and Assignments

Homework Assignments: Homework assignments will include problems giving you the opportunity in apply ideas and principles you learned to reach solutions. Although all related to what your learned in the course, some may include extra learning and a little bit of search/research; *enhancing learning.*

Quizzes:

There will be around 10 quizzes aimed at checking your understanding, on the go, about the learned material, including Lectures, Textbook Reading Assignments, and any articles if assigned to read. A quiz will be announced/scheduled a week ahead, and you must be in the online classroom to take the quiz. Missed quizzes cannot be made up.

Quiz questions are often deliberately aimed at exposing the holes and weaknesses in your understanding. Due to these holes and weaknesses, some time it may look like you are being tricked or the question the confusing. When it happened to you, it is time to revisit the concepts or principles involved in the question. This is one way quizzes enhance your learning or understanding.

Midterm Exam:

The midterm exam will take place in the classroom during class time on March 24 during regular class hours.

Final Exam:

The final exam will be comprehensive, i.e. can ask any question from the scope of the entire course.

Note: Assignments are due by 11:59 PM Pacific Time on the specified day.

Late homework assignments will NOT be accepted

Grading Information

This course uses the clear grading criteria as described in this and following section.

The final grade in the course will be calculated based on the following percentages:

1. Homework Assignments: 30%

2. Quizzes: 20%

3. Midterm: 20%

4. Final Exam: 25%

5. Participation online discussion forum, CS158A Forum Interact: 5%

Grading Scale

Nominal grading scale:

Percentage	Grade
96 and above	A$^+$
93 and above	A
90 - 92	A$^-$
87 - 89	B$^+$
82 - 86	B
80 - 81	B$^-$
77 - 79	C$^+$
72 - 76	C
70 - 71	C$^-$
67 - 69	D$^+$
62 - 66	D
60 - 61	D$^-$

59 and below   F

Online Tool Canvas

As a tool, Canvas is an integral of my teaching whether the course is online or in-person. For example, in this course, you will follow the syllabus live on Canvas==> Modules as it is being covered; at a given time, the schedule may not exactly match with that of the static schedule presented in the beginning of the course. Other Canvas features used include the following:

1. Homework Assignments are posted on and submitted to Canvas. Tests/exams are also posted and taken in Canvas. Your grades show up in Canvas Grade Books.

2. Other than the class lectures, in Zoom or Room, my main method of communication with the class with "Course Announcement" feature of of Canvas. You don't wanna miss it.

3. CS158A Forum Interact. You will be using this multipurpose Forum to interact mainly with other student in the class, but also with me. This is the Forum where you get most of the help on non-confidential course topics/issues, help other students, interact with other students in professional manners, and contribute to establishing an atmosphere that facilitated learning.

Note the following:

1) If you missed in the class or are still not sure about it, you can ask question or discuss the *relevance of any course content,* in CS158A Forum Interact.

2) The *feedback about student work* is provided by various means: 1) course announcements (collective students feedback), 2) Individual feedback as comments in the student's Grade Book, 3) Personal feedback provoked by students' question or quarry using Canvas Inbox, 4) Unprovoked personal feedback initiating from me using Canvas Inbox, if deemed necessary by the instructor.

Classroom Protocol

- **Keys to success**:
    - Do the readings and assignments, and attend class.
    - Regular attendance is an integral part of the learning process. Please arrive on time for the classes.

- **Laptop or desktop with Internet connection is** *required*. During the online Zoom class, I will be sharing my PowerPoint Presentation with the class. You can get more from the lecture by following the pointer on the PowerPoint just like room class presentation, but this time it would on your computer screen instead of Overhead Projector screen.
- In Many aspects, Zoom class is like Room class; so:
  - Please, reveal your identity, e.g. use video with live you, not your static picture.
  - Be on your laptop (not phone), and at a safe place, not on the run.
- **Cheating** will not be tolerated. Working together is encouraged, but no copying of the answers; use the online discussion forum: CS158A Forum Interact
- **Professionalism**. Student must be respectful of the instructor and other students. In the class session, keep your video on.

Students Help/Assistance

As a part of my teaching philosophy, I am very responsive to questions and comments from students. You will receive the needed responses and reasonable help if you follow you part of the following protocol:

1. *For personal/confidential topic/issue* such as individual grade, quarries should be made, or information/assistance should be sought by leaving message in Canvas Inbox for me.

2. *On non-confidential topic/issue,* help could be provided both by me or/and your fellow students. You can post about general course issues/concept and problem solving questions including those from the assignments, if you are stuck, on :

CS158A Forum Interact: General Concept and Problem Solving

University Policies

Office of Graduate and Undergraduate Programs maintains university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. You may find all syllabus related university policies and resources information listed on GUP's Syllabus Information web page (Links to an external site.) at http://www.sjsu.edu/gup/sylla

Course Schedule

Please note that the schedule is subject to change with fair notice, which will be posted through Canvas.

Week	Date	Topics
1	Jan 27	Introduction
2	Jan 31	Physical Layer
3	Feb 7	Physical Layer Data Link Layer
4	Feb 14	Data Link Layer
5	Feb 21	Medium Access Control
6	Feb 28	Medium Access Control
7	Mar 7	Network Layer
8	Mar 14	Network Layer
9	Mar 21	Network Layer Midterm
10	Mar 28	Spring Recess No Classes
11	Apr 4	Network Layer Transport Layer

Week	Date	Topics
12	Apr 11	Transport Layer
13	Apr 18	Application Layer
14	Apr 25	Network security basics
15	May 2	Network security basics II
16	May 9	Last week of classes
	May 18-25	Final Exam Date: TBD

Note:

SJSU ACADEMIC YEAR CALENDAR 2021/22 (Links to an external site.)